

weeks before, after which it became tender and sore and a lump appeared. A radical breast operation was performed. In reviewing the literature, Hamilton finds Sir Astley Cooper, in 1829, reported the condition macroscopically, while Dunbar, in 1881, reported microscopic examinations of the breast. Only 180 cases have been reported to date. Deaver and McFarland classify tuberculosis of the breast as primary and secondary. The avenue of entrance of the tubercle bacilli may be through abrasions of the skin of the nipple or from other primary foci. Slight trauma has been the exciting cause in a large percentage of the cases. The prognosis of primary tuberculosis of the breast is good, but in secondary tuberculosis the prognosis depends upon the primary focus.

THERAPEUTICS

UNDER THE CHARGE OF

SAMUEL W. LAMBERT, M.D.,

NEW YORK,

AND

CHARLES C. LIEB, M.D.,

ASSISTANT PROFESSOR OF PHARMACOLOGY, COLUMBIA UNIVERSITY.

The Digestion of the Tannin Compounds Used as Intestinal Astringents by Artificial Digestive Mixtures. Synthetic Drugs, III.—Owing to the too irritant properties of free tannic acid in the stomach, various compounds of tannic acid with proteins, organic esters of tannic acid, etc., have been proposed, which theoretically are presumed to be insoluble in and largely unchanged by gastric juice but to be decomposed by the intestinal secretions. LEECH (*Jour. Am. Med. Assn.*, 1920, lxxv, 1120) studied a number of these preparations to determine: (1) During a specified time the solubility of the respective compounds in water, hydrochloric acid solution, acid and pepsin solution, sodium bicarbonate and pancreatic extract solutions, and (2) the percentage decomposition at various intervals during the digestion. He arrives at the following conclusions: Only one type of the tannic acid compounds studied completely resists the action of the gastric juice and is broken down in the intestine according to theory, *i. e.*, the diacetyl tannic acid compound. "Acetannin Calco" (one specimen only studied) was satisfactory. "Tannigen" was fairly satisfactory in some instances. "Protan" and "Tannoform" were both readily soluble in sodium bicarbonate mediums. They are probably not broken up to a great extent in the intestine. "Albutannin Calco" and "Albutannin M. C. W." were not nearly so resistant to the acid-pepsin digestion as "Tannalbin" and "Tannin Albuminate Exsiccated" (Albutannin Merck). Neither of the two latter was sufficiently

resistant to the acid-pepsin medium but both liberated free tannic acid in the alkaline-pancreatic medium. With the exception of the (single) specimen of Aectannin, none of the products which were examined according to the methods described in this paper conformed strictly to the claims made for them.

The Use of Arsphenamin in Non-syphilitic Diseases.—From a study of the literature, REASONER and NICHOLS (*Jour. Am. Med. Assn.*, 1920, lxxv, 645) conclude that for practical therapeutic purposes the beneficial effects of arsphenamin and neo-arsphenamin are most apparent in a limited number of spirochetal diseases. They act as a specific in Vincent's angina, relapsing fever, yaws, gangosa and pulmonary spirochetosis (if given early) in man, and in equine influenza. A therapeutic effect is noted in rat-bite disease, in certain dental conditions and in fowl spirochetosis. Good results have been obtained in syphilitics with a number of non-syphilitic conditions which are influenced adversely by that disease. Their use has been recommended in conditions in which arsenic is indicated; in such cases the effect is alterative rather than specific and there is no special advantage over liquor potassii arsenitis. No apparent benefit has been found in such other spirochetal diseases as Weil's disease and yellow fever. There is a limited effect on certain protozoal diseases, such as malaria (tertian and quotidian), some of the trypanosomiasis and leishmaniasis. This effect may be non-specific. With the exception of anthrax and possibly glanders few favorable results are reported in bacterial diseases. Except in Vincent's angina, arsphenamin and neo-arsphenamin should be administered intravenously in medium-sized dosage. Two or three injections usually are sufficient, except in pulmonary spirochetosis which may require a series of injections. In diseases showing liver involvement, neo-arsphenamin has been recommended, as it is supposed to be less toxic than arsphenamin.

PEDIATRICS

UNDER THE CHARGE OF

THOMPSON S. WESTCOTT, M.D., AND ALVIN E. SIEGEL, M.D.,
OF PHILADELPHIA.

Further Progress in the Study of the Relative Efficiency of the Different Mercurial Preparations.—RAMSEY and GROEBNER (*Am. Jour. Dis. Children*, September, 1920) found that mercurial ointment, 50 per cent., is to be preferred to the less concentrated forms and need not be repeated more often than twice a week instead of daily. The quantity of mercury absorbed is much increased by friction. Calomel ointment is absorbed but less rapidly, and to a less extent than the mercurial preparation, and should, therefore, be given in greater concentration. The salicylate of mercury in oil should be given hypoder-